



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,198	01/11/2007	Kentarou Kanae	294559US0PCT	6772
22850	7590	04/17/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
KARST, DAVID THOMAS				
ART UNIT		PAPER NUMBER		
4151				
NOTIFICATION DATE		DELIVERY MODE		
04/17/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/588,198

Applicant(s)

KANAE ET AL.

Examiner

DAVID KARST

Art Unit

4151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 17-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/08)
Paper No(s)/Mail Date 06/17/2008; 10/12/2006; 08/02/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.
3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/JP05/01989, filed on February 3, 2005.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 17-24, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (JP Patent Pub 2001-200118 A, hereafter '118) and further in view of Tasaka et al (JP Patent Pub 2003-183450 A, hereafter '450).

10. Regarding claim 17, '118 teaches a thermoplastic elastomer composition (claim 1, line 1) comprising the following components [A], [B], [C], and [D], the composition having a durometer A hardness of 90 or less (see Shore A hardness, claim 3, lines 2-3): [A] 20 or less weight % of an ethylene- α -olefin-based copolymer (see c, ethylene-alpha olefin copolymer rubbers, claim 2, lines 2-3) having a limiting viscosity of 3-6 dl/g

measured in a decalin solvent at 135 (par. 0015, lines 4-5), [B] 15 or less weight % of a polyolefin-based resin (see d, polypropylene regins, claim 2, line 3), and [C] 60 to 90 weight % of a mineral oil-based softening agent (see softener, straight-mineral-oil system, claim 1, lines 7-8), [D] 5 to 40 weight % of a hydrogenated diene-based polymer (see elastomeric polymeric block of conjugated diene, a hydrogenation derivative of a block copolymer, claim 1, lines 5-7), [A] the ethylene- α -olefin-based copolymer (see olefin system rubber, par. 0006, line 6) and [B] the polyolefin-based resin (see olefin system resin, par. 0006, lines 5-6) being dynamically treated with heat (par. 0006, line 5) in the presence of a cross-linking agent (see organic peroxide, constructing a bridge, lines 6-8). These weight ranges read on the claimed ranges of 5 to 60 mass % for [A], 1 to 20 mass % for [B], 30 to 94 mass % for [C], where the total of the components [A], [B], and [C] is 100 mass %, and for 100 parts by mass of [A], [B], and [C], 0.1 to 50 parts by mass for [D]. The durometer A hardness values in '118 read on the claimed range of 42 or less. '118 teaches that the Shore A hardness is measured according to ASTM D2240 (par. 0026, line 8), which is a standard method that involves using a durometer to measure the hardness, which reads on the claimed durometer A hardness according to JIS K6253. The limiting viscosity values in '118 read on the claimed range of 3.5 dl/g or more. '118 teaches that the polyolefin-based resin (see d, polypropylene regins, claim 2, line 3) is propylene homopolymer (par. 0019, lines 1-2), which reads on the claimed polyolefin-based resin. '118 teaches that the thermoplastic elastomer composition also contains at least one kind of higher fatty acid amide, polyorganosiloxane, or acrylic silicone copolymer resin (claim 1, lines 13-16; par. 0005,

lines 26-28). Acrylic-based resin is therefore not taught, which reads on the claimed not comprising a (meth)acrylate-based resin.

11. Regarding claim 18, '118 teaches a thermoplastic elastomer composition (claim 1, line 1) comprising the following components [X], [B1], [C2], and [D1], the composition having a durometer A hardness of 90 or less (see Shore A hardness, claim 3, lines 2-3): [X] comprising [A1] 20 or less weight % of an ethylene- α -olefin-based copolymer (see c, ethylene-alpha olefin copolymer rubbers, claim 2, lines 2-3) having a limiting viscosity of 3-6 dl/g or more measured in a decalin solvent at 135 (par. 0015, lines 4-5), and [C1] 60 to 90 weight % of a mineral oil-based softening agent (see softener, straight-mineral-oil system, claim 1, lines 7-8), [B1] 15 or less weight % of a polyolefin-based resin (see d, polypropylene regins, claim 2, line 3), and [C2] a mineral oil-based softening agent (see softener, straight-mineral-oil system, claim 1, lines 7-8), [D1] 5 to 40 weight % of a hydrogenated diene-based polymer (see elastomeric polymeric block of conjugated diene, a hydrogenation derivative of a block copolymer, claim 1, lines 5-7), [A1] the ethylene- α -olefin-based copolymer (see olefin system rubber, par. 0006, line 6) and [B1] the polyolefin-based resin (see olefin system resin, par. 0006, lines 5-6) being dynamically treated with heat (par. 0006, line 5) in the presence of a crosslinking agent (see organic peroxide, constructing a bridge, par. 0006, lines 6-8). '118 teaches that the mineral oil-based softening agent (see softener, straight-mineral-oil system, claim 1, lines 7-8) is used to raise the flowability of the thermoplastic elastomer composition and plasticity (par. 0020, lines 1-3), which means it is used as an oil-extender, which reads on the claimed [X] an oil-extended rubber. The weight ranges in '118 read on the

claimed ranges of 5 to 60 mass % for [X], 20 to 80 mass % for [A1], 20 to 80 mass % for [C1], where the total of [A1] and [C1] is 100 mass %, 1 to 20 mass % for [B1], 30 to 94 mass % for [C2], where the total of [X], [B1], and [C2] is 100 mass %, and for 100 parts by mass of [X], [B1], and [C2], 0.1 to 50 parts by mass for [D]. The durometer A hardness values in '118 read on the claimed range of 42 or less. The Shore A hardness in '118 (par. 0026, line 8) reads on the claimed durometer A hardness according to JIS K6253. The limiting viscosity values in '118 read on the claimed range of 3.5 dl/g or more. '118 teaches that the polyolefin-based resin (see d, polypropylene resins, claim 2, line 3) is propylene homopolymer (par. 0019, lines 1-2), which reads on the claimed polyolefin-based resin. Acrylic-based resin is therefore not taught, which reads on the claimed not comprising a (meth)acrylate-based resin.

12. Regarding claims 17 and 18, '118 does not teach a toluene solution viscosity (30°C., 5 mass %) of 42 mPas or more.

13. Regarding claims 17 and 18, in the analogous prior art, '450 teaches a hydrogenated diene-based polymer (see block copolymer, par. 0049, line 1) with a toluene solution viscosity, 77°F., 5 mass %, of 5-500 cps, preferably 20-300 cps (see solution viscosity, a 5% toluene solution, 77 degrees F, par. 0050). A polymer with a viscosity of 5-500 cps, which is equivalent to 5-500 Pas, in 5% toluene at 77°F, which is equivalent to 25°C, intrinsically has a viscosity within the range of 42 mPas or more in 5% toluene at 30°C, which reads on the claimed range of 42 mPas or more. '450 teaches that the block copolymer is an aromatic vinyl compound-conjugated diene compound block copolymer and its hydrogenation component (par. 0039, lines 1-2),

which read on the claimed hydrogenated diene-based polymer. '450 also teaches that the hydrogenated diene-based polymer provides for the benefit of heat-resistance and weatherability (see block copolymer, par. 0047; par. 0048) and preventing the composition from being too hard (see aromatic vinyl compound-conjugated diene compound random copolymer and its hydrogenation thing, par. 0035, lines 1-3, 8-13). '450 also teaches a thermoplastic elastomer composition (claim 2, line 1) comprising 100 parts by weight of an olefin system copolymer rubber (claim 1, line 1) that is ethylene-propylene rubber (par. 0021, lines 1-2), 15-150 parts by weight olefin system resin (claim 1, lines 1-2) that is a polymer of an olefin (par. 0026, lines 1, 7), 1-100 parts by weight softener (claim 5, line 2) that is straight-mineral-oil (par. 0056, line 1), 1-20 parts by weight of silicone oil (claim 6), and a conjugated diene system copolymer (claim 4). '450 also teaches that the composition has a Shore A hardness of 40 or more (par. 0007, lines 1-2). '450 also teaches an ester system bridge formation assistant (claim 1, lines 4-5) that is an allyl cyanurate (par. 0032, lines 5-6) and an organic peroxide component (claim 1, line 4) that is a radical generator for the bridge formation (par. 0030, lines 2-3). The composition in '450 is therefore analogous to that in '118 with respect to the polymers in the composition.

14. Regarding claims 17 and 18, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the hydrogenated diene-based polymer with a toluene solution viscosity, 77°F., 5 mass %, of 5-500 cps as disclosed in '450 (par. 0050) to modify the thermoplastic elastomer composition disclosed in '118 (claim 1, line 1, 5-8; claim 2, lines 2-3; claim 3, lines 2-3; par. 0006, lines 5-8; par. 0015,

lines 4-5; par. 0020, lines 1-3) for the benefit of heat-resistance and weatherability (par. 0047; par. 0048) and preventing the composition from being too hard as disclosed in '450 (par. 0035, lines 1-3, 8-13) since the thermoplastic elastomer compositions disclosed in '118 and '450 (claim 1, lines 1-2, 4-5; claim 2, line 1; claim 4; claim 5, line 2; claim 6; par. 0007, lines 1-2; par. 0020, lines 1-3; par. 0021, lines 1-2; par. 0026, lines 1, 7; par. 0030, lines 2-3; par. 0049, line 1; par. 0056, line 1) are analogous with respect to the polymers in the compositions.

15. Regarding claims 19 and 20, '118 teaches the hydrogenated diene-based polymer [D] (see component b, par. 0009, line 1) is at least one polymer (see block copolymer, par. 0009, line 3) selected from the group consisting of hydrogenated products of polymers (see hydrogenation derivative, par. 0009, lines 1-2) comprising a monomer unit of a conjugated diene compound (see block of conjugated diene, par. 0009, line 6) and hydrogenated products of polymers (see hydrogenation derivative, par. 0009, lines 1-2) comprising a monomer unit of a conjugated diene compound (see block of conjugated diene, par. 0009, line 6) and a monomer unit of a vinyl aromatic compound (see block of monovinyl substitution aromatic hydrocarbon, par. 0009, lines 4-5).

16. Regarding claims 21 and 22, '118 teaches the amount of α -olefin monomer unit (see copolymerization ratio of alpha olefin, par. 0012, line 8) constituting the ethylene- α -olefin-based copolymer (see ethylene-alpha olefin copolymer rubber, par. 0012, line 1) of [A] is 5 to 60 mol % of the total monomer units consisting of the ethylene monomer unit and a monomer unit of an α -olefin compound (see copolymer which uses ethylene

and alpha olefin, par. 0012, lines 1-3). The amount of ethylene monomer unit in '118 is therefore 40 to 95 mol%, which reads on the claimed range of 35 to 95 mol %.

17. Regarding claims 23 and 24, '118 teaches the mineral oil-based softening agent of [C] (see softener for straight-mineral-oil system, par. 0020, line 1) is a paraffin-based mineral oil (see paraffin chain, par. 0020, lines 4-5).

18. Regarding claims 29 and 30, '118 teaches a glove rail fabricated by injection molding (par. 0033, lines 10-13) the thermoplastic elastomer composition (par. 0033, lines 1-7), which reads on the claimed molded article.

19. Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over '118 in view of '450 as applied to claims 17-24, 29, and 30 above and further in view of Ito et al (JP Patent Pub 08-291239 A, hereafter '239).

20. Regarding claims 25 and 26, the previous combination remains as applied above, and '118 further teaches the crosslinking agent (see constructing a bridge dynamically, par. 0006, lines 7-8) is an organic peroxide (see under existence of organic peroxide, par. 0006, line 7-8).

21. Regarding claims 25 and 26, '118 and '450 do not teach the crosslinking agent is an organic peroxide selected from the group consisting of 1,3-bis(t-butylperoxyisopropyl)benzene, 2,5-dimethyl-2,5-di(t-butylperoxy)hexyne-3, 2,5-dimethyl-2,5-di(t-butylperoxy)hexane, α,α -bis(t-butylperoxy)diisopropylbenzene, dicumyl peroxide, and di-t-butyl peroxide.

22. Regarding claims 25 and 26, in the analogous prior art, '239 teaches the crosslinking agent (see crosslinking treatment by the organic peroxide, par. 0050, lines 1-2) is an organic peroxide selected from the group consisting of 1,3-bis(t-butylperoxyisopropyl)benzene, 2,5-dimethyl-2,5-di(t-butylperoxy)hexyne-3, 2,5-dimethyl-2,5-di(t-butylperoxy)hexane, dicumyl peroxide, and di-t-butyl peroxide (par. 0047), which reads on the claimed group of 1,3-bis(t-butylperoxyisopropyl)benzene, 2,5-dimethyl-2,5-di(t-butylperoxy)hexyne-3, 2,5-dimethyl-2,5-di(t-butylperoxy)hexane, α,α -bis(t-butylperoxy)diisopropylbenzene, dicumyl peroxide, and di-t-butyl peroxide. '239 teaches that some of the organic peroxides provide for the benefit of scorching stability and odor that is not unpleasant (par. 0048, line 1). '239 also teaches a thermoplastic elastomer composition (claim 1, line 8) that comprises 20-60 parts by weight an olefin system rubber (claim 1, line 2) that is an ethylene and alpha-olefin copolymer rubber (par. 0018, line 6), 10-50 parts by weight of a crystalline polyolefin resin (claim 1, line 1), 5-40 parts by weight of a softener (claim 1, line 9) that is paraffin (par. 0032, line 1), and 20-60 parts by weight of a block copolymer that comprises butadiene and that is hydrogenated (claim 1, lines 2-7). The composition disclosed in '239 is therefore analogous to those in '118 (claim 1, line 1, 5-8; claim 2, lines 2-3; claim 3, lines 2-3; par. 0006, lines 5-8; par. 0015, lines 4-5; par. 0020, lines 1-3) and '450 (claim 1, lines 1-2, 4-5; claim 2, line 1; claim 4; claim 5, line 2; claim 6; par. 0007, lines 1-2; par. 0020, lines 1-3; par. 0021, lines 1-2; par. 0026, lines 1, 7; par. 0030, lines 2-3; par. 0049, line 1; par. 0056, line 1) with respect to the polymers in the composition.

23. Regarding claims 27 and 28, '118 and '450 do not teach the ethylene- α -olefin-based copolymer in the thermoplastic elastomer composition has a cyclohexane insoluble content at 23°C of 60 mass % or more.

24. Regarding claims 27 and 28, in the analogous prior art, '239 teaches the ethylene- α -olefin-based copolymer (see B, claim 2, line 5; claim 1, line 2) in the thermoplastic elastomer composition has a cyclohexane insoluble content of 97% or more (see gel content, claim 2, line 7), which reads on the claimed range of 60 mass % or more. Since '239 does not disclose that the composition is heated to obtain the gel content, it is therefore obtained at room temperature, which reads on the claimed 23°C. '239 teaches that the cyclohexane insoluble content (see gel content, claim 2, line 7) is determined by the following formula: amended last weight/amended initial weight * 100 (par. 0046, lines 1-5), where the amended last weight is obtained by taking the weight of the sample before cyclohexane immersion and subtracting the weight of the dry bottom that is cyclohexane insoluble elements other than polymer components and the weight of crystalline polyolefin resin (par. 0044, lines 3-7) and the amended initial weight is obtained by taking the weight of cyclohexane insoluble elements, crystalline polyolefin resin, and polymer components (par. 0044, lines 14-17). This definition of the gel content taught in '239 reads on the applicant's definition of the cyclohexane insoluble content in the specification. '239 teaches that making the degree of cross linking higher (par. 0003, lines 6-7) provides for the benefit of excellent rubber elasticity (par. 0004, lines 1-2). Based on the definition of gel content in '239 (par. 0044, lines 3-7, 14-17), a greater degree of cross linking is indicated by a greater gel content.

25. Regarding claims 25-28, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the organic peroxide crosslinking agents (par. 0047; par. 0050, lines 1-2) and the gel content of 97% or more (claim 2, line 7) as disclosed in '239 to modify the organic peroxide crosslinking agent (par. 0006, line 7-8) and the ethylene-alpha olefin copolymer rubbers (claim 2, lines 2-3) as disclosed in '118 and the hydrogenated diene-based polymer (par. 0050) disclosed in '450 for the benefit of scorching stability (par. 0048, line 1) and excellent rubber elasticity (par. 0004, lines 1-2) as disclosed in '239 since the thermoplastic elastomer compositions disclosed in '239 (claim 1, lines 1-9; par. 0018, line 6; par. 0032, line 1), '118 (claim 1, line 1, 5-8; claim 2, lines 2-3; claim 3, lines 2-3; par. 0006, lines 5-8; par. 0015, lines 4-5; par. 0020, lines 1-3), and '450 (claim 1, lines 1-2, 4-5; claim 2, line 1; claim 4; claim 5, line 2; claim 6; par. 0007, lines 1-2; par. 0020, lines 1-3; par. 0021, lines 1-2; par. 0026, lines 1, 7; par. 0030, lines 2-3; par. 0049, line 1; par. 0056, line 1) are analogous with respect to the polymers in the compositions.

26. Claims 31-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over '118 in view of '450 as applied to claims 17-24, 29, and 30 above and further in view of Kanae et al (US Patent No 6,670,426 B2, hereafter '426).

27. Regarding claims 31 and 32, '118 and '450 do not teach a sealing material with low hardness made from the thermoplastic elastomer composition.

28. Regarding claims 31 and 32, in the analogous prior art, '426 teaches a sealing material (col. 12, line 8) made from the thermoplastic elastomer composition (see olefin

thermoplastic elastomers, col. 11, line 66). '426 teaches that the durometer A hardness of the olefin thermoplastic elastomer is at most 96 (col. 2, lines 40, 44), which reads on the claimed low hardness in claims 31 and 32 and on the claimed range of durometer A hardness of 42 or less in claims 17 and 18. '426 also teaches the olefin thermoplastic elastomer comprises an olefin random copolymer of ethylene, α -olefin, an unsaturated monomer having a functional group, and optionally a non-conjugated diene (col. 1, lines 63-67; col. 2, line 1). '426 also teaches that the olefin random copolymer is crosslinked (col. 2, lines 1-2). '426 also teaches that the composition comprises a thermoplastic resin, rubber, and a softening agent (col. 3, lines 1-5). The olefin thermoplastic elastomer composition disclosed in '426 is therefore analogous to those disclosed in '118 (claim 1, lines 1, 5-8; claim 2, lines 2-3; claim 3, lines 2-3; par. 0006, lines 6-8; par. 0015, lines 4-5) and '450 (claim 1, lines 1-2, 4-5; claim 2, line 1; claim 4; claim 5, line 2; claim 6; par. 0007, lines 1-2; par. 0020, lines 1-3; par. 0021, lines 1-2; par. 0026, lines 1, 7; par. 0030, lines 2-3; par. 0049, line 1; par. 0056, line 1) with respect to the polymers in the composition.

29. Regarding claims 33 and 34, '118 and '450 do not teach the sealing material formed into the shape of an O-ring, a sheet, or a rod.

30. Regarding claims 33 and 34, in the analogous prior art, '426 teaches the sealing material formed into the shape of window sealing gaskets, door sealing gaskets, gaskets for trunk room, roof side rails, inner panels, door trims, weatherstrips, leather sheets, waterproofing sheet materials, rolls and cleaning blades for information

instruments, films for electronic parts, and protecting films for images (col. 12, lines 4-16), which read on the claimed group of O-ring, a sheet, or a rod.

31. Regarding claims 35 and 36, '118 and '450 do not teach a container using the sealing material as a component.

32. Regarding claims 35 and 36, in the analogous prior art, '426 teaches housing and the like for light electric parts (col. 12, lines 13-14), which reads on the claimed container. '426 also teaches sealing materials for electronic parts (col. 12, lines 15-16) and sealing materials and the like for general machines and apparatus (col. 12, lines 12-13). Since the sealing materials for electronic parts, general machines, and apparatus are components of light electric parts, this reads on the claimed sealing material as a component.

33. Regarding claims 37 and 38, '118 and '450 do not teach a container formed from a composite body comprising a sealing part made from the sealing material and a main body, produced by injection molding;

34. Regarding claims 37-38, in the analogous prior art, '426 teaches housing and the like for light electric parts (col. 12, lines 13-14) and sealing materials for electronic parts (col. 12, lines 15-16). Since the sealing materials for electronic parts and the housing and the like for light electric parts are components of one body, they read on the claimed a container formed from a composite body comprising a sealing part made from the sealing material and a main body. '426 teaches that the composition can be easily processed by injection molding (col. 11, lines 52-53), which reads on the claimed produced by injection molding.

35. Regarding claims 39 and 40, '118 further teaches that for the thermoplastic elastomer composition, recycling is easy (par. 0039, lines 1-4), which reads on the claimed can be recycled.
36. Regarding claims 39 and 40, '118 and '450 do not teach the container wherein the main body is made from a thermoplastic resin and/or a thermoplastic elastomer composition.
37. Regarding claims 39 and 40, in the analogous prior art, '426 teaches that the housing and the like for light electric parts (col. 12, lines 13-14) is made from the olefin thermoplastic elastomer composition disclosed in '426 (col. 11, lines 66-67; col. 12, lines 1-2; col. 1, lines 63-67; col. 2, lines 1-2; col. 3, lines 1-5), which reads on the claimed the container wherein the main body is made from a thermoplastic elastomer composition, which reads on the claimed a thermoplastic resin and/or a thermoplastic elastomer composition.
38. Regarding claims 31-40, '426 teaches that the composition can be used to produce the disclosed articles of manufacture (col. 12, lines 3-20) because the composition provides for the benefit of excellent rubber elasticity, flexibility, processability, and scratch resistance (col. 11, lines 66-67; col. 12, lines 1-2).
39. Regarding claims 31-40, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the articles of manufacture that are sealing materials as disclosed in '426 (col. 12, lines 4-16) to modify the thermoplastic elastomer compositions disclosed in '118 (claim 1, lines 1, 5-8; claim 2, lines 2-3; claim 3, lines 2-3; par. 0006, lines 6-8; par. 0015, lines 4-5) and '450 (claim 1, lines 1-2, 4-5;

claim 2, line 1; claim 4; claim 5, line 2; claim 6; par. 0007, lines 1-2; par. 0020, lines 1-3; par. 0021, lines 1-2; par. 0026, lines 1, 7; par. 0030, lines 2-3; par. 0049, line 1; par. 0056, line 1) for the benefit of excellent rubber elasticity, flexibility, procesability, and scratch resistance as disclosed in '426 (col. 11, lines 66-67; col. 12, lines 1-2) since the thermoplastic elastomer compositions disclosed in '426 (col. 1, lines 63-67; col. 2, lines 1-2; col. 3, lines 1-5) are analogous to those disclosed in '118 and '450 with respect to the polymers in the compositions.

40. Claims 31, 32, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over '118 in view of '450 as applied to claims 17-24, 29, and 30 above and further in view of Kouichi et al (US Patent No 6,011,090 A, hereafter '090).

41. Regarding claims 31 and 32, '118 and '450 do not teach a sealing material with low hardness made from the thermoplastic elastomer composition.

42. Regarding claims 31 and 32, in the analogous prior art, '090 teaches an electronic photographic cartridge that contains a charged roller and a toner (col. 9, lines 10-16), which reads on the claimed a sealing material made from the thermoplastic elastomer composition. '090 teaches a resin composition that has low hardness (col. 7, lines 7-9), which reads on the claimed low hardness. '090 also teaches a resin composition that comprises a resin containing a styrene thermoplastic elastomer and an olefin thermoplastic elastomer (col. 1, lines 52-56) that is an ethylene-propylene copolymer rubber and an ethylene-propylene-non-conjugated diene copolymer rubber (col. 2, lines 33-39), which may be used in a combination as a mixture of a plurality of

the ethylene-propylene copolymer rubbers (col. 2, lines 58-60). '090 also teaches an olefin thermoplastic elastomer having an elastic body subjected to heat treatment and crosslinking in the presence of an organic peroxide (col. 2, lines 39-42). '090 also teaches that the resin composition comprises a conductive filler (col. 1, line 3). The thermoplastic elastomer composition disclosed in '090 is therefore analogous to those disclosed in '118 (claim 1, lines 1, 5-8; claim 2, lines 2-3; claim 3, lines 2-3; par. 0006, lines 6-8; par. 0015, lines 4-5) and '450 (claim 1, lines 1-2, 4-5; claim 2, line 1; claim 4; claim 5, line 2; claim 6; par. 0007, lines 1-2; par. 0020, lines 1-3; par. 0021, lines 1-2; par. 0026, lines 1, 7; par. 0030, lines 2-3; par. 0049, line 1; par. 0056, line 1) with respect to the polymers in the compositions. '090 also teaches that the resin composition provides for the benefit of excellent moldability and electroconductivity (col. 1, lines 45-51).

43. Regarding claims 41 and 42, '118 and '450 do not teach a toner case having the sealing material as a component.

44. Regarding claims 41 and 42, '090 teaches an electronic photographic cartridge with a toner (col. 9, lines 10-16), which reads on the claimed a toner case having the sealing material as a component.

45. Regarding claims 31, 32, 41, and 42, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the electrophotographic cartridge with a toner as disclosed in '090 (col. 9, lines 10-16) to modify the thermoplastic elastomer compositions disclosed in '118 (claim 1, lines 1, 5-8; claim 2, lines 2-3; claim 3, lines 2-3; par. 0006, lines 6-8; par. 0015, lines 4-5) and '450

(claim 1, lines 1-2, 4-5; claim 2, line 1; claim 4; claim 5, line 2; claim 6; par. 0007, lines 1-2; par. 0020, lines 1-3; par. 0021, lines 1-2; par. 0026, lines 1, 7; par. 0030, lines 2-3; par. 0049, line 1; par. 0056, line 1) for the benefit of excellent moldability and electroconductivity as disclosed in '090 (col. 1, lines 45-51) since the thermoplastic elastomer compositions disclosed in '090 (col. 1, lines 52-56; col. 2, lines 33-42, 58-60), '118, and '450 are analogous with respect to the polymers in the compositions.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID KARST whose telephone number is (571)270-7732. The examiner can normally be reached on Monday-Thursday, 7:30 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571)272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DK

***/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 4151***